

REMARKS / ARGUMENTS

Status of Claims

Claims 1-27 are pending in the application and stand rejected. Of the pending claims, Applicant herein provides clarifying remarks, for consideration by the Examiner, to traverse the rejections. No claim amendments have been made, and therefore under 37 CFR 1.121, no claim listing is provided herewith.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(e) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Rejections Under 35 U.S.C. §102(e)

Claims 1-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by Cesmeli (U.S. Patent No. 6,438,196 B1, hereinafter Cesmeli). Applicant traverses this rejection for the following reasons.

Cesmeli discloses a method and system for reconstructing an image of a beating heart using an EKG device and a CT device, and reconstructing an image using tagged data, the projection data being tagged with cardiac phase information based on the decomposition of at least one EKG RR interval such that the EKR RR interval is separated into constituent parts. (Col. 1, lines 43-50). As used in Cesmeli, the term “tagging” means correlating, or associating, positional and/or cardiac phase data with the scan data. Such tagging is performed by storing the positional or cardiac phase data with the scan data itself, or by storing positional or cardiac phase data in a table that is correlated to the scan data. Additionally, and as used in Cesmeli, the term “decomposing” means separating an EKG signal, or a portion of the EKG signal, into constituent parts, such as a P wave, a Q wave, a R wave, a S wave, or a T wave. (Col. 2, lines 23-31). Notably absent from Cesmeli is any disclosure of an exposure marker-in signal or an R marker-in signal that overlays EKG waveform data.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the *** claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

In comparing Cesmeli with the instant invention, Applicant respectfully submits that independent Claims 1, 13, 23, 24, and 25, include the element of an *exposure marker-in signal at an electrocardiogram device* such that *the exposure marker-in signal is associated with the EKG waveform data*. Applicant finds no disclosure of this element in Cesmeli, and the Examiner has not explained how Cesmeli does disclose this element.

Dependent claims inherit all of the limitations of the respective parent claim.

At paragraph [0023] and Figure 4, Applicant describes and illustrates an R marker-in signal 226 that overlays EKG waveform data 200.

At paragraph [0025] and Figure 4, Applicant describes and illustrates an exposure marker-in signal 228 that overlays EKG waveform data 200.

At paragraph [0026], Applicant describes how the EKG waveform data 200, with the R marker-in signal 226 and the exposure marker-in signal 228 overlay, are communicated to CT imaging system 4 so as to be processed and associated with the corresponding CT imaging data.

In support of the allegation that Cesmeli discloses the claimed invention, the Examiner cites col. 2, lines 18-30, col. 5, lines 30-40, and col. 2, lines 29-37, of Cesmeli,

where reference is made to “tagging” and “decomposing”. Here, the Examiner understands an exposure marker-in signal to be a “tag”, and the overlay of EKG data with exposure marker in-signal to be “decomposing”. (Paper 5, pages 2 and 3).

In respectful disagreement with the Examiner, Applicant finds, as used in Cesmeli, “tagging” to mean correlating, or associating, positional and/or cardiac phase data with the scan data, and “decomposing” to mean separating an EKG signal, or a portion of the EKG signal, into constituent parts, such as a P wave, a Q wave, a R wave, a S wave, or a T wave. (Col. 2, lines 23-31). Here, the terms “tagging” and “decomposing” do not disclose either an R marker-in signal or an exposure marker-in signal that overlay EKG waveform data, as claimed in the instant invention.

Where Cesmeli discloses the “tagging” of positional and/or cardiac phase data with scan data, or the “decomposing” of an EKG signal into constituent parts, the instant invention claims the element of an exposure marker-in signal 228 at an electrocardiogram device such that the exposure marker-in signal 228 is associated with the EKG waveform data, which is a substantially different invention to that of Cesmeli. Applicant finds no disclosure in Cesmeli of an R marker-in signal or an exposure marker-in signal being overlaid on EKG data.

Additionally, in rejecting the instant invention on grounds of anticipation, the Examiner alleges that Cesmeli teaches “generating and introducing an event signal to electrocardiogram device to overlay EKG waveform data”, and an “exposure marker in-signal responsive to CT imager”, but offers no specific reference in Cesmeli where these elements may be found. (Paper 5, page 3). For an anticipation rejection to be proper, it is not enough for an Examiner to merely state that a reference “teaches” the claimed invention, rather the Examiner must show with specificity each and every element of the claim as arranged in the claim in a single prior art reference. Here, the Examiner has not met this burden and therefore cannot properly reject the instant invention on grounds of anticipation.

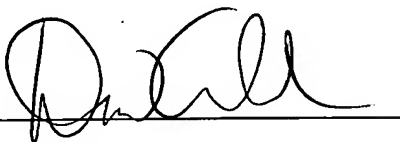
In view of the foregoing remarks, Applicant respectfully submits that Cesmeli does not disclose each and every element of the claimed invention, and discloses a substantially different invention to the claimed invention, and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(e) has been traversed, and requests that the Examiner reconsider and withdraw of all rejections under 35 U.S.C. §102(e).

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,

CANTOR COLBURN LLP
Applicant's Attorneys

By: 

David Arnold
Registration No: 48,894
Customer No. 23413

Address: 55 Griffin Road South, Bloomfield, Connecticut 06002
Telephone: (860) 286-2929
Fax: (860) 286-0115